

## **What Do Our Foods Contain?**

The following excerpts are taken from '*Nutrition for the Brain – feeding your brain for optimum performance*', Charles Krebs, BS, PhD, (2006) (Pub: Michelle Anderson Publishing Melbourne)

“In a study of vegetables and fruits produced by biodynamic, organic and conventional factory farming in Australia in the 1980s, there were large differences in the nutritional content of the foods. For instance, tomatoes grown biodynamically and organically had 1000mg of Vitamin C per 100 grams of flesh, while factory farmed tomatoes had only 100mg of Vitamin C, 10 times less of this vital nutrient! There were similar differences in the mineral content of the other fruits and vegetables analysed. Would you eat 10 of these factory farm tomatoes to make up the difference? In the 2004 analysis of German tomatoes there was even less Vitamin C with only 20 to 29mg per 100 grams, suggesting things are getting worse, not better.

In a recent Danish study, rats were fed diets containing either totally organic grown food, low fertiliser grown food, or conventionally grown food, and then their health monitored throughout their entire lives. The results were remarkable as researchers found rats that ate organic or minimally fertilised diets had:

- Improve immune system status compared to rats that ate conventional diets.
- Better sleeping habits.
- Less weight and were slimmer than rats that fed on other diets.
- Higher vitamin E content in their blood, an important antioxidant (for organically fed rats).

Even though the experiment clearly demonstrates the positive effects of organically grown foods compared to conventionally grown foods on the health of rats, the results cannot be directly correlated to humans. However, in many other studies such as the toxicity of drugs, the results from rat trials are considered significant and these results certainly suggest a similar trial be repeated with humans – but perhaps not for their entire lifetime.

**In conventional farming there are now over 400 chemicals routinely used to kill weeds, insects, and other pests that attack crops. For example, Cox's apples in the UK can be sprayed up to 16 times with 36 different pesticides. Current farming practices using all of these herbicides and pesticides leave food contaminated with these toxins that are not easily 'washed away'. Sir John Krebs, Chairman of the UK Food Standards Agency, recently stated that 'Organic foods contain fewer residues of the pesticides used in conventional agriculture, so consumers who wish to minimise their dietary pesticide exposure can do so with confidence by buying organically grown food.' A 2002 study of preschoolers in Seattle showed that**

**children who ate a conventional diet had nine times in their urine as their counterparts who ate organically grown foods, and another study in 2003 replicated these results.**

**A benchmark study of the pesticide and Industrial toxin contaminants in the umbilical cord blood of 10 healthy new born infants is both surprising and distressing. The study focused on the cord blood, as this mirrors the mixture of chemicals the baby has been exposed to during development. The following toxic chemicals were found in infant's cord blood:**

- 76 chemicals that cause cancer**
- 94 chemicals that are toxic to the brain and nervous system**
- 79 chemicals that cause birth defects or abnormal development in animals.**

**The report, Body Burden – the Pollution in Newborns, by the Washington, D.C. based Environmental Working Group, detected 287 chemicals in the umbilical cord blood of newborns, including seven pesticides – some banned over 30 years ago in the United States. Scientists blame the presence of these banned pesticides in the babies' blood on the fact that many of these compounds take decades to break down and some are still used in foreign countries, which export produce to the United States.**

**Although the amounts of some chemicals detected were extremely low, the results are still troubling to experts, since no one knows how much of a given chemical – much less a mixture of these chemicals - could affect a human foetus. What research exists has shown that chemical exposure in the womb can be dramatically more harmful than later in life. In 2003, the US EPA updated its cancer risk guidelines, finding that carcinogens are 10 times as potent to babies than adults and that some chemicals are up to 65 times more potent in children. While the EPA sets maximum safe exposure limits for these toxins, the research behind these tolerances came from studies of 'healthy men' in the middle of their life – not pregnant women, newborns or young children!**